CONTROL MEASURE EVALUATION CRITERIA

The national and California Clean Air Acts provide general guidance on how to evaluate potential control measures to determine whether they should be included in attainment strategies. The general guidance for each process is summarized below.

Evaluation Criteria for Control Measures in National Attainment Strategies

The national Clean Air Act requires that attainment plans "shall provide for the implementation of all reasonably available control measures as expeditiously as possible." EPA guidance requires states to consider all available control measures and to adopt those measures that are reasonably available for implementation in light of local circumstances. EPA guidance further states that the interpretation of the reasonably available control measure (RACM) requirement would not require the adoption of measures if they would not advance the attainment date or would cause adverse economic or other impacts. EPA guidance has also stated that minor reductions that impose significant administrative burdens are not considered reasonably available. In general, for control measures to be approved by EPA, and credited in a plan, the resulting emission reductions must be real, quantifiable, permanent, enforceable, and surplus.

Finally, because Bay Area photochemical modeling has shown for over 20 years that reductions in nitrogen oxides (NOx) tend to increase Bay Area ozone levels, measures that reduce NOx are not required to be included as RACM in attainment demonstrations for the national standard since they delay rather than advance the attainment date.

Evaluation Criteria for Control Measures in State Air Quality Plans

The California Clean Air Act (CCAA) requires the Clean Air Plan (CAP) to include control measures sufficient to achieve 5% per year reduction in ozone precursor emissions, or, alternately, all feasible measures with an expeditious adoption schedule. The CCAA does not define "feasible", but the Health and Safety Code provides direction on determining feasibility in the definition of Best Available Retrofit Control Technology (BARCT), required on stationary sources in the Bay Area. BARCT is defined as "an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy and economic impacts by each class or category of source." Accordingly, the District deems potential CAP control measures to be feasible if they are:

- reasonable and necessary for the San Francisco Bay Area;
- capable of being implemented in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors; and
- approved or approvable by the Air Resources Board.

The CCAA also states that districts "shall consider the relative cost-effectiveness of the measure…as well as other factors, including, but not limited to, technological feasibility, total emission reduction potential, the rate of reduction, public acceptability, and enforceability. Finally, the CCAA requires that an upwind district's plan contain mitigation requirements established by ARB. If/when ARB modifies the transport mitigation requirements, the evaluation and selection of Bay Area CAP control measures may be affected.

Factors Considered for Each Control Measure

As a result of the guidance, the District must consider a variety of factors when evaluating each potential control measure, including:

- Technological feasibility of proposed controls;
- Total likely emission reductions from proposed controls;
- Whether the emission reductions are real, quantifiable, permanent, enforceable, and surplus;
- Whether reduction is of volatile organic compounds or nitrogen oxides or both;
- Cost-effectiveness in dollars per ton of emissions reduced;
- Rate of emission reduction;
- Any potential adverse environmental impacts;
- Socioeconomic impacts;
- Public acceptability